AD-A079 991 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19702A GSRS, MISSILE NUMBER BR-3, ROUND NUMBER B-35, 31 AUGUST --ETC(U)
AUG 79
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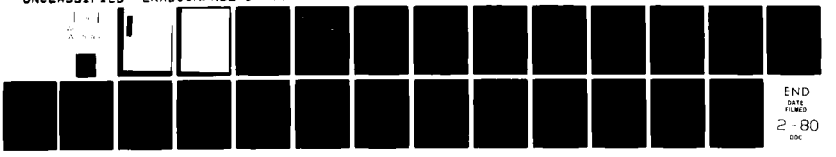

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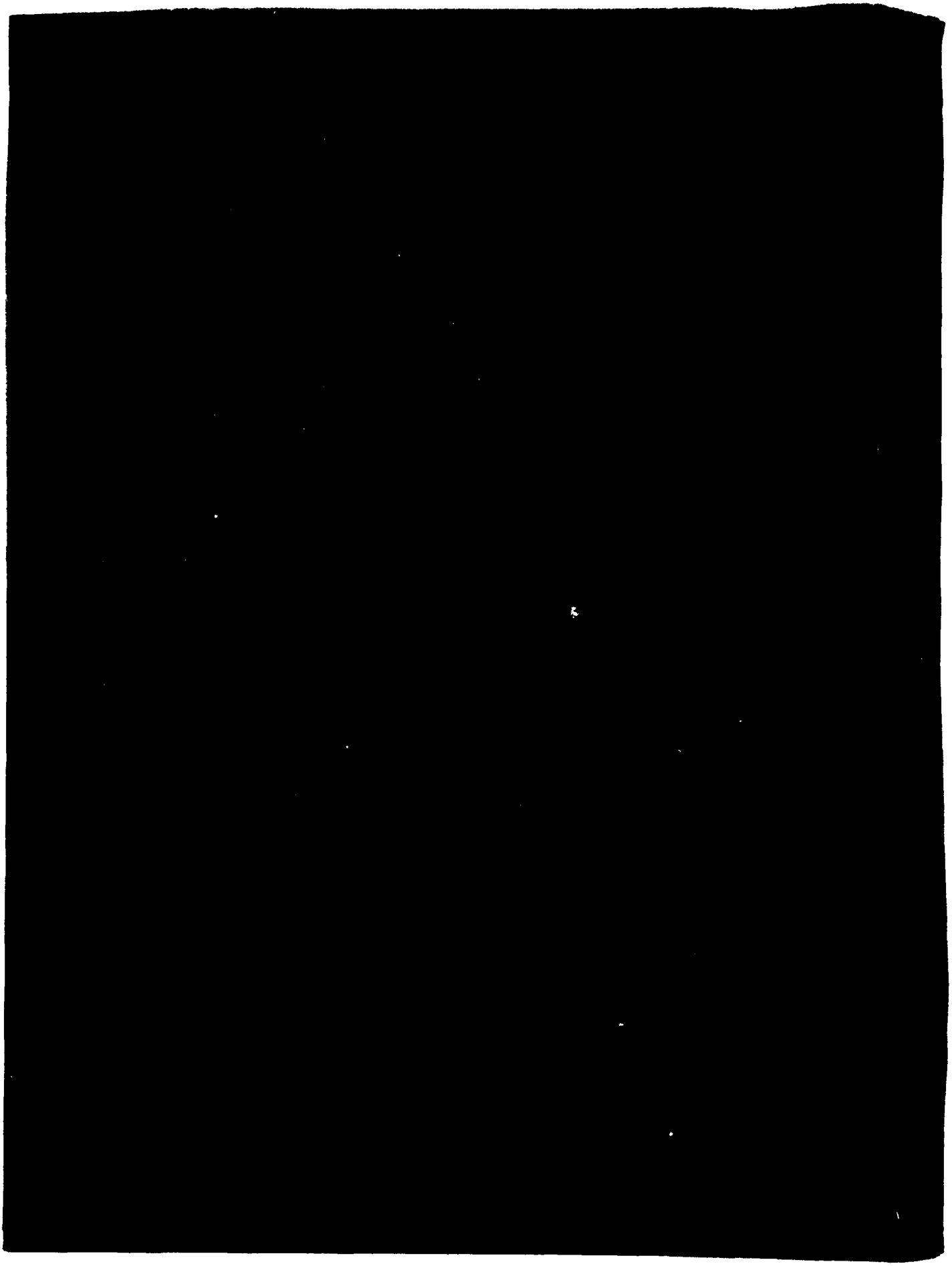

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Meteorological data gathered for the launching of the 19702A GSRS, Missile Number BR-3, Round Number B-35, are presented in tabular form.

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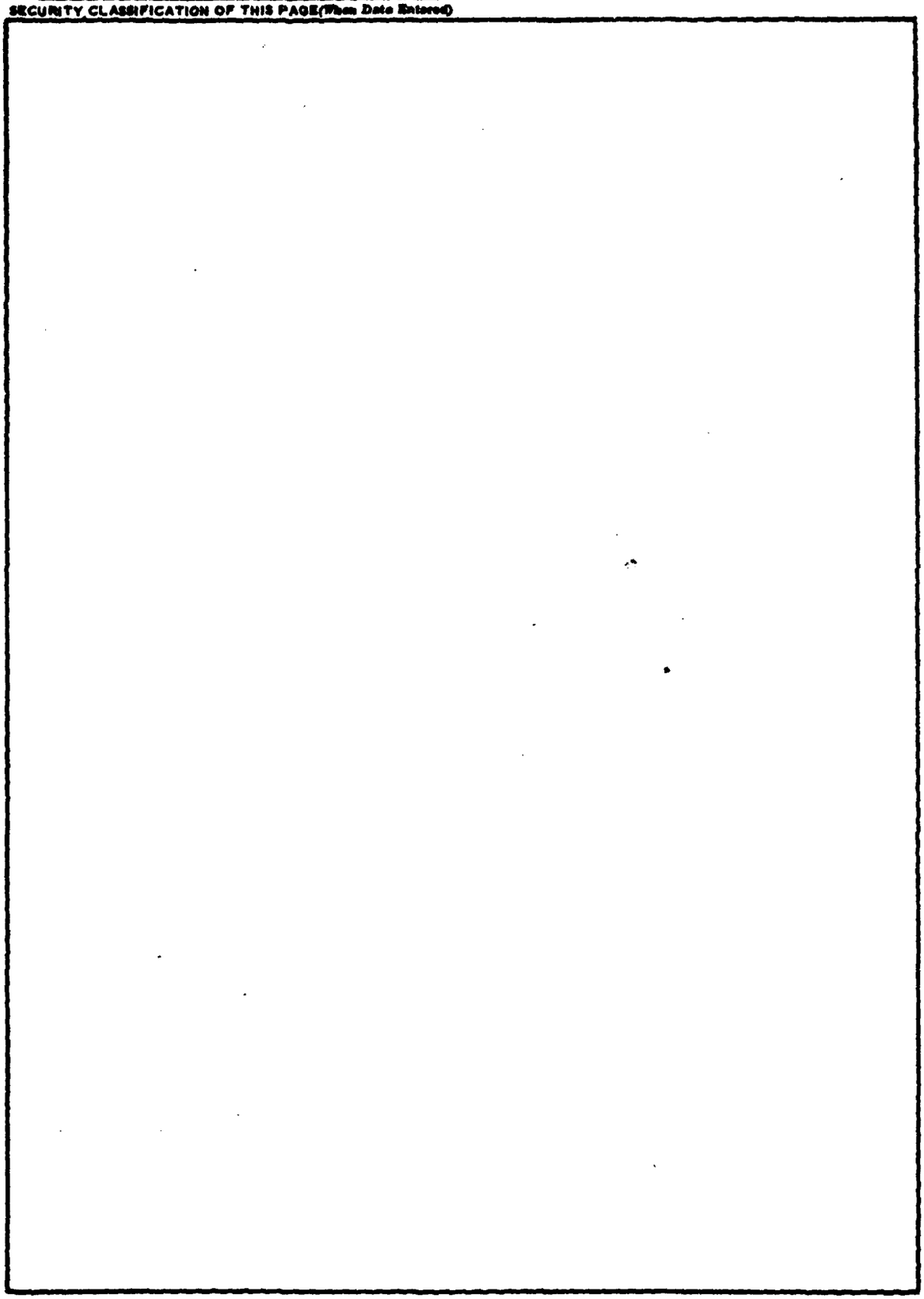


CONTENTS

INTRODUCTION

19702A GSRS , Missile Number BR-3 , Round Number B-35 , was launched from LC-33 , White Sands Missile Range (WSMR), New Mexico, at 0945 MDT, 31 August 1979 . The scheduled launch time was 0945 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

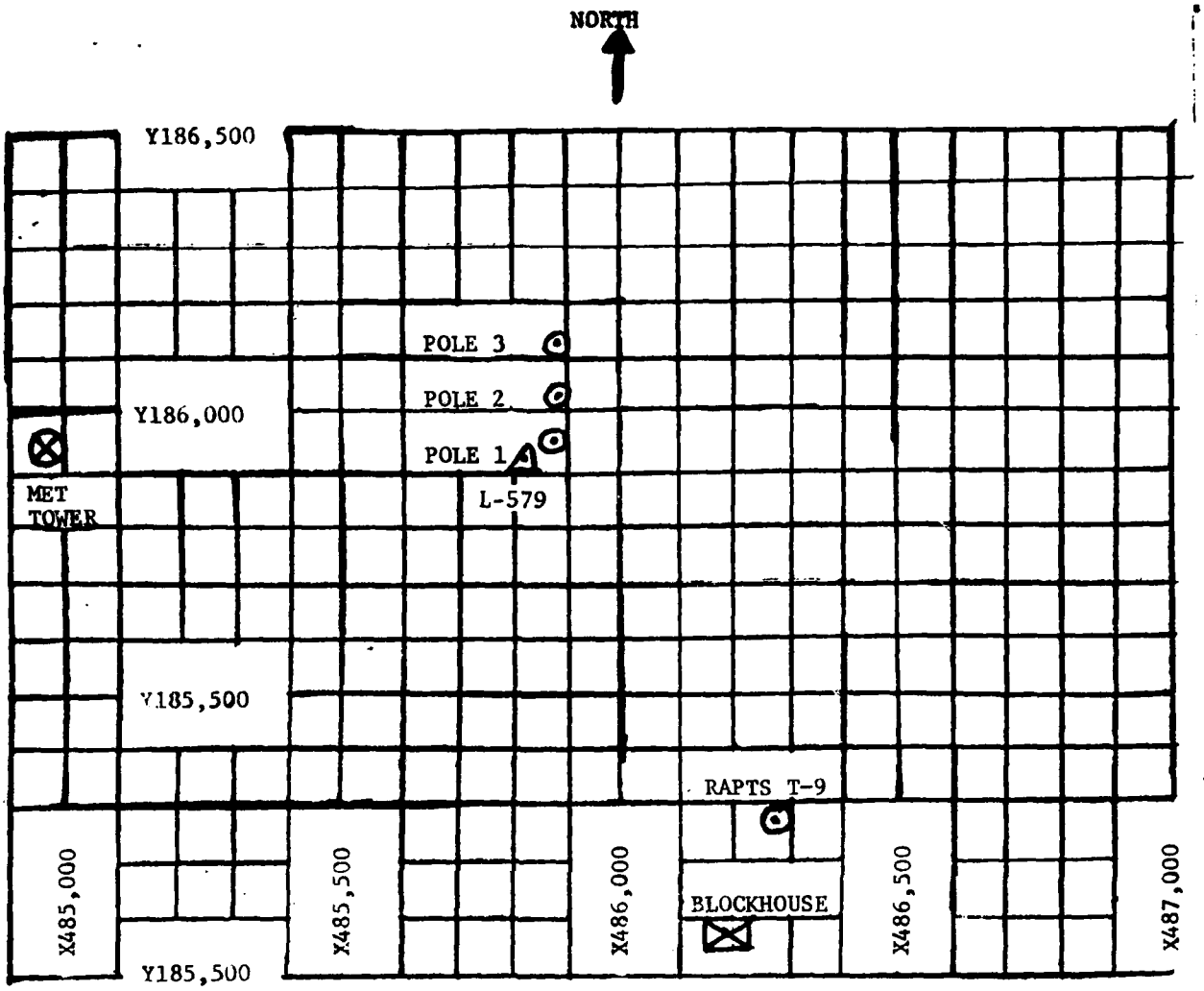
b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE
LC-33 2040 Meters
NICK 2040 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 88,500 feet in 500-feet increments.

SITE AND TIME
SMR 0838 MST



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.

2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.

   (a) Pole #1 - 38.7 ft

   (b) Pole #2 - 53.0 ft

   (c) Pole #3 - 83.6 ft

3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

TABLE 1. Surface Observations Taken at 0945 MDT, 31 August 1979, at LC-33, 19702A GSRS, Missile Number BR-3, Round Number B-35.

ELEVATION	3,977.3	FT/MSL
PRESSURE	880.0	MBS
TEMPERATURE	25.1	°C
RELATIVE HUMIDITY	63.0	%
DEW POINT	17.5	°C
DENSITY	1,020.0	GM/M^3
WIND SPEED	02.0	
WIND DIRECTION	060	DEGREES
CLOUD COVER	1	Cu
CLOUD COVER	1	Cs

TABLE 2. LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	131	1.0	-30	063	1.0	-30	CALM	
-20	129	1.0	-20	063	1.0	-20	CALM	
-10	129	1.0	-10	063	1.0	-10	CALM	
0.0	129	1.0	0.0	063	1.0	0.0	CALM	
+10	129	1.0	+10	063	1.0	+10	CALM	

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

TYPE 19702A GSRS MISSILE NO. BR-3 ROUND NO. B-35

LAUNCHED FROM LC-33 DATE 31 August 1979 TIME 0945 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

TABLE 3. LC-33 METEOROLOGICAL TOWER ANEMOMETER-MEASURED WINDS (202 FT. TOWER)

LEVEL #1 12 ft.			LEVEL #2 62 ft.		
T-TIME SEC	DIR DEG	SPEED	T-TIME SEC	DIR DEG	SPEED
-30	077	4.0	-30	120	3.0
-20	090	3.0	-20	117	3.0
-10	087	2.0	-10	117	2.0
0.0	090	2.0	0.0	CALM	CALM
+10	099	4.0	+10	108	1.0
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED	T-TIME SEC	DIR DEG	SPEED
-30	144	2.0	-30	141	2.0
-20	134	3.0	-20	141	3.0
-10	134	3.0	-10	141	2.0
0.0	134	3.0	0.0	135	2.0
+10	117	1.0	+10	127	3.0

WTSM Coordinates: X484,982.64 Y185,957.73 H3983.00 (base)

Type 19702A GSRS, Missile No. BR-3, Round No. B-35 launched from LC-33 on 31 August 1979 at 0945 MDT.

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-33 DATE 31 August 1979 TIME 0932 MDT

RELEASE POINT COORDINATES (WSTM) X=486,037.24 Y= 182,350.16 H= 3,977.30

MISSILE TYPE 19702A GSRS MISSILE NO. BR-3 ROUND NO. B-35

MISSILE LAUNCHED FROM LC-33 DATE 31 August 1979 TIME 0945 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC		CALM
60		CALM
120	342	01.0
180	202	02.2
240	090	00.5
300	032	03.8
360	169	04.0
420	182	02.6
480	153	06.0
540	161	08.0
600	170	11.0
660	179	12.0
720	193	09.0
780	189	07.5
840	189	08.5
900	206	09.0
960	211	11.5
1020	211	12.5
1080	212	11.0

HEIGHTS AGL	DIRECTION DEGREES	SPEED KTS
1140	208	10.0
1200	208	08.0
1260	224	08.0
1320	213	07.0
1380	196	07.0
1440	194	04.5
1500	202	05.5
1560	208	05.0
1620	215	04.0
1680	226	02.5
1740	194	01.3
1800	177	02.2
1860	167	03.6
1920	180	01.5
1980	095	01.5
2040	055	02.9
2100		
2160		
2220		

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-33 DATE 31 August 1979 TIME 0945 MDT

RELEASE POINT COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30

MISSILE TYPE 19702A GSRS MISSILE NO. BR-3 ROUND NO. B-35

MISSILE LAUNCHED FROM LC-33 DATE 31 August 1979 TIME 0945 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	060	02.0
60	322	01.5
120	163	02.6
180	122	01.8
240	039	01.5
300	122	03.2
360	168	07.0
420	175	07.0
480	157	06.0
540	175	06.0
600	186	09.0
660	197	08.0
720	197	07.0
780	184	06.0
840	197	08.0
900	211	10.0
960	204	13.0
1020	214	12.0
1080	200	11.0

HEIGHTS AGL	DIRECTION DEGREES	SPEED KTS
1140	198	11.0
1200	210	09.0
1260	207	07.0
1320	207	07.5
1380	201	07.0
1440	194	06.0
1500	202	04.4
1560	205	03.7
1620	215	03.0
1680	208	02.4
1740	208	02.4
1800	154	01.8
1860	140	02.2
1920	162	02.5
1980	118	00.7
2040	040	01.8

PILOT BALLOON MEASURED WIND DATA

TABLE 6

RELEASED FROM Nick Site DATE 31 August 1979 TIME 0935 MDT

RELEASE POINT COORDINATES (WSTM) X=470,734.56 Y= 255,775.64 H= 4,126.57

MISSILE TYPE 19702A GSRS MISSILE NO. BR-3 ROUND NO. B-35

MISSILE LAUNCHED FROM LC-33 DATE 31 August 1979 TIME 0945 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	075	03.0
60	074	00.5
120	188	01.5
180	192	02.5
240	174	03.0
300	162	02.0
360	144	02.0
420	157	03.5
480	187	04.0
540	193	03.5
600	189	03.0
660	199	03.5
720	196	02.5
780	210	01.0
840	333	01.0
900	270	02.0
960	239	01.5
1020	236	03.0
1080	223	03.5

HEIGHTS AGL	DIRECTION DEGREES	SPEED KTS
1140	198	02.0
1200	157	01.5
1260	117	01.5
1320	146	01.0
1380	159	01.0
1440	135	02.5
1500	135	00.5
1560	037	00.5
1620	090	02.0
1680	270	00.5
1740	311	02.0
1800	299	02.0
1860	301	03.0
1920	298	03.0
1980	306	03.5
2040	311	03.0
2100		
2160		
2220		

PILOT BALLOON MEASURED WIND DATA

TABLE 7

RELEASED FROM Nick Site DATE 31 August 1979 TIME 0945 MDT

RELEASE POINT COORDINATES (WSTM) X=470,734.56 Y=255,775.64 H= 4,126.57

MISSILE TYPE 19702A GSRS MISSILE NO. BR-3 ROUND NO. B-35

MISSILE LAUNCHED FROM LC-33 DATE 31 August 1979 TIME 0945 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC		CALM
60	276	01.0
120	142	03.0
180	144	04.5
240	150	05.5
300	163.05.5	05.5
360	146	03.5
420	145	03.5
480	135	03.0
540	180	01.5
600	202	02.5
660	202	04.0
720	175	03.0
780	205	02.0
840	292	01.5
900	288	02.0
960	270	02.5
1020	234	02.5
1080	227	03.5

HEIGHTS AGL	DIRECTION DEGREES	SPEED KTS
1140	197	04.5
1200	200	02.0
1260	216	01.0
1320	161	02.0
1380	133	01.5
1440	135	01.5
1500	143	00.5
1560	022	01.0
1620	275	01.0
1680	315	02.0
1740	256	00.5
1800	288	02.5
1860	281	03.5
1920	269	04.5
1980	302	02.5
2040	288	02.0
2100		
2160		
2220		

STATION ALTITUDE 3997.30 FEET MSL
31 AUG. 79 0838 HRS MST
ASCENSION NO. 266

SIGNIFICANT LEVEL DATA
243006028O
S M R
TABLE 8

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
879.2	3997.3	26.2	18.6	64.0
873.2	4195.3	23.7	15.7	61.0
850.0	4967.4	21.5	15.6	69.0
820.8	5961.5	18.8	14.7	77.0
795.8	6837.8	19.5	13.4	67.0
721.6	9567.6	14.7	5.0	52.0
700.0	10430.0	12.6	2.7	51.0
657.6	12141.7	8.0	2.5	68.0
640.2	12867.8	6.2	-1.7	57.0
597.2	14767.1	1.4	-4.9	63.0
572.4	15845.3	-1.3	-12.2	43.0
555.6	16615.4	-2.1	-22.6	19.0
547.6	17004.1	-1.4	-24.6	15.0
500.0	19306.6	-5.7	-28.9	14.0
484.8	20160.9	-6.6	-30.4	13.0
440.4	22601.0	-12.5	-34.4	14.0
426.0	23434.9	-13.3	-35.0	14.0
400.0	24998.9	-17.7	-38.6	14.0
364.8	27244.3	-22.9	-42.3	15.0
332.8	29438.7	-27.6	-46.2	15.0
314.4	30763.0	-28.5	-46.9	15.0
300.0	31883.8	-30.9	-48.9	15.0
284.8	33092.7	-33.3		
250.0	36061.5	-40.7		
236.4	37308.0	-43.7		
221.6	38733.2	-45.7		
200.0	40955.8	-51.5		
184.6	42629.9	-56.0		
180.6	43111.4	-56.4		
150.0	46923.5	-64.6		
141.0	48160.3	-67.6		
116.6	51856.7	-72.1		
113.4	52433.9	-69.8		
100.0	54924.0	-66.7		
89.4	57134.1	-71.5		
83.8	58400.0	-70.0		
76.4	59733.5	-62.2		
70.0	62042.2	-62.8		
65.2	63497.1	-60.0		
60.2	65133.9	-62.2		

STATION ALTITUDE 3997.30 FEET MSL
31 AUG. 79 0838 HRS MST
ASCENSION NO. 206

SIGNIFICANT LEVEL DATA
24300-0206
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

TABLE 8 Cont.

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
57.6	65970.1	-59.2		
52.6	67856.3	-60.8		
50.0	68900.0	-59.3		
42.8	72204.9	-55.8		
30.0	79727.9	-53.3		
22.6	85852.0	-46.8		
20.0	88547.7	-44.5		

UPPER AIR DATA

STATION ALTITUDE 3997.30 FEET MSL
31 AUG. 79 0838 HRS MST
ASCENSION NO. 200

2430080280
S M R
TABLE 9

GEODETIC COORDINATES
32.48034 LAT DEG.
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T.N.)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3997.3	879.2	26.2	18.8	64.0	1013.6	677.2	.0	.0	1.000318
4000.0	879.1	26.2	18.8	64.0	1013.6	677.2	193.1	.0	1.000318
4500.0	834.0	22.8	15.7	64.2	1008.9	674.9	193.1	.7	1.000302
5000.0	849.0	21.4	15.5	69.3	996.2	671.5	193.1	1.5	1.000299
5500.0	834.2	20.1	15.1	73.3	983.4	668.7	193.1	2.2	1.000295
6000.0	819.7	18.8	14.6	76.6	970.5	665.3	192.5	2.9	1.000290
6500.0	805.3	19.2	13.6	70.9	952.4	660.0	173.2	2.4	1.000282
7000.0	791.2	19.2	12.7	66.1	938.1	656.5	150.4	2.2	1.000274
7500.0	777.3	18.3	11.3	63.4	924.9	653.3	142.6	2.1	1.000265
8000.0	763.6	17.5	9.8	60.7	909.8	650.1	139.9	2.0	1.000257
8500.0	750.1	16.6	8.3	57.2	896.3	646.8	151.1	1.7	1.000249
9000.0	736.9	15.7	6.8	55.2	884.1	643.8	161.6	1.2	1.000242
9500.0	723.9	14.9	5.2	52.5	871.5	640.7	179.1	.6	1.000235
10000.0	710.9	13.7	3.9	51.5	859.8	637.4	207.5	.3	1.000229
10500.0	698.2	12.4	2.8	51.7	848.3	634.7	310.5	.8	1.000224
11000.0	685.6	11.1	2.8	56.7	836.9	631.1	330.0	.6	1.000222
11500.0	673.2	9.7	2.7	61.6	825.0	628.0	61.5	.4	1.000219
12000.0	661.0	8.4	2.5	66.6	814.5	625.0	129.1	1.9	1.000217
12500.0	649.0	7.1	.5	62.6	803.7	623.4	134.2	3.5	1.000210
13000.0	637.0	5.9	-1.9	57.4	792.9	621.8	135.0	4.6	1.000203
13500.0	625.2	4.6	-2.7	59.0	781.9	620.2	133.2	6.1	1.000199
14000.0	613.7	3.3	-3.6	60.7	771.1	618.7	129.5	7.5	1.000195
14500.0	602.3	2.0	-4.5	62.3	760.5	617.1	129.4	8.9	1.000191
15000.0	591.1	.7	-6.5	58.1	750.0	615.5	130.5	10.3	1.000186
15500.0	579.9	-.5	-9.8	49.2	739.5	613.9	139.8	9.0	1.000180
16000.0	569.0	-1.5	-13.8	38.2	728.6	612.0	153.5	7.7	1.000173
16500.0	558.3	-2.0	-20.5	22.6	718.6	611.0	164.1	5.8	1.000166
17000.0	547.7	-1.4	-24.6	15.0	707.7	609.4	217.0	5.5	1.000161
17500.0	537.2	-2.3	-25.5	14.8	698.0	607.3	243.9	4.9	1.000158
18000.0	527.9	-3.2	-26.4	14.6	687.8	606.2	267.7	4.7	1.000155
18500.0	517.0	-4.1	-27.3	14.4	677.1	604.1	290.2	4.6	1.000152
19000.0	507.1	-5.0	-28.2	14.2	666.6	603.0	300.0	4.6	1.000150
19500.0	497.4	-5.9	-29.1	13.8	656.0	601.1	300.0	4.7	1.000147
20000.0	487.8	-6.4	-30.1	13.2	646.9	600.4	321.5	4.3	1.000145
20500.0	478.4	-7.4	-30.9	13.1	636.9	599.2	335.3	4.4	1.000142
21000.0	469.0	-8.6	-31.7	13.3	627.5	597.7	337.4	4.9	1.000140
21500.0	459.9	-9.8	-32.6	13.5	618.3	596.3	337.1	5.7	1.000138
22000.0	450.9	-11.0	-33.4	13.8	609.2	595.0	334.3	6.9	1.000135
22500.0	442.2	-12.3	-34.2	14.0	599.2	593.3	330.4	7.5	1.000133
23000.0	433.5	-12.9	-34.7	14.0	588.8	592.0	341.3	7.7	1.000131

STATION ALTITUDE 3997.30 FEET MSL
31 AUG. 79 0038 HRS MST
ASCENSION NO. 206

UPPER AIR DATA
2430060200
S M R
TABLE 9 Cont.

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
25500.0	424.9	-13.5	-35.2	14.0	569.9	627.9	347.7	8.0	1.000129
26000.0	416.4	-14.9	-36.3	14.0	561.6	626.1	354.0	8.4	1.000127
26500.0	408.1	-16.3	-37.5	14.0	553.4	624.4	352.2	7.5	1.000125
27000.0	400.0	-17.7	-38.6	14.0	545.4	622.7	347.8	6.1	1.000123
27500.0	391.9	-18.9	-39.4	14.2	536.7	621.3	329.2	5.6	1.000121
28000.0	383.9	-20.0	-40.2	14.4	528.2	619.9	309.4	5.6	1.000119
28500.0	376.1	-21.2	-41.0	14.7	519.9	618.5	303.6	7.7	1.000117
29000.0	368.5	-22.3	-41.9	14.9	511.7	617.0	300.6	9.8	1.000115
29500.0	360.9	-23.4	-42.7	15.0	503.5	615.7	4.3	2.8	1.000113
30000.0	353.4	-24.5	-43.6	15.0	495.2	614.3	63.0	6.5	1.000111
30500.0	346.1	-25.6	-44.5	15.0	487.0	613.0	260.2	15.6	1.000109
31000.0	339.0	-26.7	-45.4	15.0	479.0	611.7	276.5	35.6	1.000107
31500.0	331.9	-27.6	-46.2	15.0	471.0	610.5	274.3	52.4	1.000105
32000.0	325.0	-28.0	-46.5	15.0	461.7	610.0	271.5	51.3	1.000103
32500.0	318.2	-28.3	-46.7	15.0	452.7	609.6	265.5	37.5	1.000101
33000.0	311.5	-29.0	-47.3	15.0	444.4	608.8	267.6	35.3	1.000100
33500.0	304.9	-30.1	-48.2	15.0	437.0	607.4	272.7	36.7	1.000098
34000.0	298.5	-31.1	-50.0	13.6**	429.8	606.1	279.2	39.9	1.000096
34500.0	292.2	-32.1	-55.8	7.4**	422.2	604.8	284.5	43.4	1.000094
35000.0	285.9	-33.1	-70.3	1.2**	415.0	603.6	284.0	45.6	1.000092
35500.0	279.8	-34.3			408.0	602.1	283.2	47.4	1.000091
36000.0	273.7	-35.6			401.3	600.5	280.1	46.5	1.000089
36500.0	267.7	-36.8			394.6	599.9	278.9	46.0	1.000088
37000.0	261.9	-38.1			388.1	597.3	279.6	47.1	1.000086
37500.0	256.2	-39.3			381.7	595.7	279.6	48.1	1.000085
38000.0	250.7	-40.5			375.4	594.2	279.1	48.4	1.000084
38500.0	245.1	-41.8			369.0	592.6	277.6	48.8	1.000082
39000.0	239.7	-43.0			362.7	591.1	277.7	49.3	1.000081
39500.0	234.3	-44.0			356.2	589.6	277.6	51.2	1.000079
40000.0	229.1	-44.7			349.3	588.9	277.4	56.0	1.000078
40500.0	224.0	-45.4			342.5	588.0	277.0	60.2	1.000078
41000.0	218.9	-46.4			336.3	586.8	278.4	63.0	1.000075
41500.0	213.9	-47.7			330.3	585.3	278.3	64.6	1.000074
42000.0	209.0	-49.0			324.9	583.3	284.2	62.0	1.000072
42500.0	204.3	-50.3			319.3	581.8	282.9	60.4	1.000071
43000.0	199.6	-51.6			313.9	579.8	281.8	59.4	1.000070
43500.0	194.9	-53.0			308.4	578.1	282.0	59.0	1.000069
44000.0	190.4	-54.3			303.1	576.3	283.7	59.0	1.000068
44500.0	185.9	-55.7			297.6	574.5	285.3	59.0	1.000066
45000.0	181.6	-56.3			293.7	573.7	287.3	59.0	1.000065

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.00 FEET MSL
31 AUG. 79 0038 HRS MST
ASCENSION NO. 206

UPPER AIR DATA
243000206
S M R
TABLE 9 Cont.

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	177.2	-57.2			285.9	572.4	267.0	59.3	1.000064
44000.0	173.0	-58.3			280.4	571.0	267.2	59.8	1.000062
44500.0	168.8	-59.4			275.1	569.6	266.9	61.3	1.000061
45000.0	164.7	-60.5			269.8	568.2	266.6	63.5	1.000060
45500.0	160.8	-61.5			264.7	566.7	266.6	64.8	1.000059
46000.0	156.9	-62.6			259.6	565.3	267.0	64.8	1.000058
46500.0	153.1	-63.7			254.7	563.8	267.4	63.0	1.000057
47000.0	149.4	-64.8			249.8	562.3	268.3	58.2	1.000056
47500.0	145.7	-66.1			245.2	560.8	269.4	53.8	1.000055
48000.0	142.1	-67.4			240.6	559.3	270.9	50.2	1.000054
48500.0	138.6	-68.2			235.5	557.7	272.2	46.7	1.000052
49000.0	135.1	-68.8			230.3	556.9	272.5	43.8	1.000051
49500.0	131.7	-69.4			225.1	556.1	272.9	40.9	1.000050
50000.0	128.4	-69.9			220.1	555.4	275.2	39.0	1.000049
50500.0	125.2	-70.5			215.2	554.6	277.7	37.1	1.000048
51000.0	122.0	-71.1			210.4	553.8	280.0	35.0	1.000047
51500.0	118.9	-71.7			205.7	553.0	282.5	32.8	1.000046
52000.0	115.9	-71.5			200.3	553.2	285.4	28.4	1.000045
52500.0	113.0	-69.7			195.5	555.7	289.6	22.8	1.000043
53000.0	110.2	-69.1			186.1	556.5	294.0	17.6	1.000042
53500.0	107.5	-68.5			182.9	557.4	297.2	13.7	1.000041
54000.0	104.8	-67.9			177.8	558.2	298.4	10.1	1.000040
54500.0	102.2	-67.2			172.8	559.0	268.8	9.2	1.000038
55000.0	99.6	-66.9			168.2	559.3	242.4	10.5	1.000037
55500.0	97.1	-68.0			164.9	558.1	225.9	12.5	1.000037
56000.0	94.7	-69.0			161.0	556.8	214.0	15.2	1.000036
56500.0	92.3	-70.1			156.4	555.1	211.1	14.8	1.000035
57000.0	90.0	-71.2			155.3	555.8	210.4	12.0	1.000035
57500.0	87.7	-71.1			151.3	555.8	210.1	9.1	1.000034
58000.0	85.5	-70.5			147.0	556.6	222.3	6.0	1.000033
58500.0	83.4	-69.4			142.0	558.1	219.5	2.8	1.000032
59000.0	81.3	-66.5			137.1	560.0	248.4	1.9	1.000031
59500.0	79.3	-63.6			134.8	564.0	291.0	1.8	1.000029
60000.0	77.4	-62.3			127.8	565.7	45.0	2.5	1.000028
60500.0	75.5	-62.4			124.8	565.0	68.1	7.1	1.000026
61000.0	73.7	-62.5			121.9	564.4	74.1	11.0	1.000027
61500.0	71.9	-62.7			119.0	563.2	80.4	12.7	1.000026
62000.0	70.1	-62.8			116.2	563.0	85.1	14.5	1.000026
62500.0	68.5	-61.9			112.9	564.2	87.0	13.7	1.000025
63000.0	66.8	-61.0			109.7	565.0	88.7	12.2	1.000024

STATION ALTITUDE 3997.30 FEET MSL
31 AUG. 79 0838 HRS MST
ASCENSION NO. 206

UPPER AIR DATA
24300600206
S M R
TABLE 9 Cont.

GEODETIC COORDINATES
32.48034 LAT DEG.
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) DEGREES	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	65.2	-60.0			100.5	566.8	89.4	12.1	1.000024
64000.0	63.6	-60.7			104.3	567.9	87.9	14.7	1.000023
64500.0	62.1	-61.3			102.1	567.0	88.9	17.2	1.000023
65000.0	60.6	-62.0			100.0	566.1	88.0	19.3	1.000022
65500.0	59.1	-60.9			97.1	567.6	89.3	21.3	1.000022
66000.0	57.7	-59.2			94.0	569.8	91.2	22.7	1.000021
66500.0	56.3	-59.7			91.9	569.2	90.3	22.3	1.000020
67000.0	55.0	-60.1			89.9	568.7	101.5	22.0	1.000020
67500.0	53.7	-60.5			87.9	568.1	102.3	20.5	1.000020
68000.0	52.4	-60.6			85.8	568.0	100.0	18.3	1.000019
68500.0	51.1	-59.9			83.5	568.9	96.9	16.2	1.000019
69000.0	49.9	-59.3			81.3	569.6	87.3	15.4	1.000018
69500.0	48.7	-58.7			79.2	570.3	77.1	15.1	1.000018
70000.0	47.6	-58.2			77.1	571.2	70.8	15.5	1.000017
70500.0	46.4	-57.6			75.1	571.9	70.3	16.2	1.000017
71000.0	45.3	-57.1			73.1	572.6	70.2	16.9	1.000016
71500.0	44.3	-56.6			71.2	573.3	74.8	18.1	1.000016
72000.0	43.2	-56.0			69.3	574.1	79.8	19.6	1.000015
72500.0	42.2	-55.7			67.8	574.5	84.2	21.1	1.000015
73000.0	41.2	-55.5			66.0	574.7	87.3	22.3	1.000015
73500.0	40.3	-55.4			64.4	574.9	91.8	23.5	1.000014
74000.0	39.3	-55.2			62.8	575.1	93.1	24.4	1.000014
74500.0	38.4	-55.0			61.3	575.4	94.2	24.8	1.000014
75000.0	37.5	-54.9			59.9	575.6	95.2	25.2	1.000013
75500.0	36.6	-54.7			58.4	575.8	95.2	25.3	1.000013
76000.0	35.8	-54.5			57.0	576.0	97.1	25.4	1.000013
76500.0	34.9	-54.4			55.8	576.2	98.0	25.5	1.000012
77000.0	34.1	-54.2			54.3	576.4	98.8	25.9	1.000012
77500.0	33.3	-54.0			53.0	576.7	98.9	26.4	1.000012
78000.0	32.6	-53.9			51.7	576.9	99.2	26.9	1.000012
78500.0	31.8	-53.7			50.5	577.1	99.8	26.6	1.000011
79000.0	31.0	-53.5			49.3	577.3	100.3	26.1	1.000011
79500.0	30.3	-53.4			48.1	577.5	101.2	25.8	1.000011
80000.0	29.6	-53.0			46.9	578.0	99.3	25.7	1.000010
80500.0	28.9	-52.5			45.7	578.7	97.4	25.9	1.000010
81000.0	28.3	-51.9			44.5	579.4	95.4	26.2	1.000010
81500.0	27.6	-51.4			43.4	580.1	92.8	27.2	1.000010
82000.0	27.0	-50.9			42.3	580.8	88.8	28.5	1.000009
82500.0	26.4	-50.4			41.3	581.5	83.3	30.0	1.000009
83000.0	25.8	-49.8			40.2	582.2	83.4	30.9	1.000009

UPPER AIR DATA
2430000200
S M R

STATION ALTITUDE 3997.30 FEET MSL
31 AUG 79 0000 HRS MST
ASCENSION NO. 256

GEODETIC COORDINATES
32.48034 LAT DEG.
106.42307 LON DEG

TABLE 9 Cont.

GEOMETRIC ALTITUDE ASL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
03500.0	25.2	-49.3			39.2	562.9	81.5	31.7	1.000009
04000.0	24.6	-48.8			38.2	583.0	80.5	32.7	1.000009
04500.0	24.1	-48.2			37.3	584.3	83.0	34.3	1.000008
05000.0	23.5	-47.7			36.3	584.9	86.3	36.6	1.000008
05500.0	23.0	-47.2			35.4	585.6	88.1	36.3	1.000008
06000.0	22.4	-46.7			34.5	586.3	89.9	36.6	1.000008
06500.0	21.9	-46.2			33.7	586.8	91.5	36.6	1.000007
07000.0	21.5	-45.8			32.9	587.4	92.7	36.6	1.000007
07500.0	21.0	-45.4			32.1	587.9			1.000007
08000.0	20.5	-45.0			31.3	588.5			1.000007
08500.0	20.0	-44.5			30.5	589.0			1.000007

MRN SIGNIFICANT LEVEL DATA

STATION ALTITUDE 3997.30 FEET MSL
31 AUG. 79 0638 HRS MST
ASCENSION NO. 266

2430060266
S M R

GEODETIC COORDINATES
32.46834 LAT DEG
106.42307 LON DEG

TABLE 10

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
2066.	9999.**	9999.**	-9999.**	-9999.**	99	-44.5	2.000+1
2005.	89.	19.	-0.	-19.	99	-46.8	2.260+1
2420.	101.	13.	2.	-13.	99	-53.3	3.000+1
2192.	82.	10.	-2.	-10.	99	-55.3	4.260+1
2094.	88.	8.	-0.	-8.	99	-59.3	5.000+1
2060.	101.	10.	2.	-10.	99	-60.8	5.260+1
2003.	91.	12.	0.	-12.	99	-59.2	5.780+1
1978.	88.	10.	-0.	-10.	99	-62.2	6.020+1
1929.	89.	8.	-0.	-8.	99	-60.0	6.520+1
1885.	85.	8.	-1.	-8.	99	-62.8	7.000+1
1815.	326.	1.	-1.	0.	99	-62.2	7.840+1
1774.	217.	2.	1.	1.	99	-70.0	8.380+1
1736.	210.	6.	5.	3.	99	-71.5	8.940+1
1669.	246.	5.	2.	5.	99	-66.7	1.000+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET MSL
31 AUG. 79 0830 HRS MST
ASCENSION NO. 286

MANDATORY LEVELS
24300600200
S M R

TABLE 11

GEODETIC COORDINATES
32.46034 LAT DEG.
106.42307 LON DEG

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	4964.	21.5	15.6	69.	193.1	1.4
800.0	6683.	19.4	13.5	69.	164.0	2.2
750.0	8502.	16.6	8.5	56.	151.2	1.7
700.0	10420.	12.6	2.7	51.	307.9	.6
650.0	12444.	7.2	.7	69.	134.0	3.4
600.0	14580.	1.7	-4.5	65.	129.6	9.1
550.0	16868.	-1.6	-24.0	10.	211.8	5.6
500.0	19339.	-5.7	-28.9	14.	304.8	4.7
450.0	22024.	-11.2	-33.5	14.	334.6	7.0
400.0	24957.	-17.7	-38.6	14.	347.1	6.2
350.0	28187.	-25.0	-44.0	15.	296.6	5.8
300.0	31820.	-30.9	-46.9	15.	277.6	39.0
250.0	35982.	-40.7			208.9	48.4
200.0	40850.	-51.5			201.9	59.6
175.0	43655.	-57.8			267.5	59.5
150.0	46795.	-64.6			266.1	59.2
125.0	50387.	-70.6			277.8	37.1
100.0	54753.	-66.7			247.2	10.0
80.0	59126.	-64.6			272.8	1.7
70.0	61826.	-62.8			85.2	14.6
60.0	64967.	-62.0			88.4	20.0
50.0	68699.	-59.3			88.3	15.5
40.0	73335.	-55.3			91.5	23.8
30.0	79385.	-53.3			100.9	25.6
25.0	83274.	-49.1			81.1	31.9
20.0	88130.	-44.5				

STATION ALTITUDE 3997.30 FEET MSL
31 AUG. 79 0838 HRS MST
ASCENSION NO. 266

MRN MANDATORY LEVELS
2430000266
S M R

TABLE 12

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	TEMPERATURE DEW PT DEP DEG C	AIR DEG C	PRESSURE MILLIBARS
2080.	9999.**	9999.**	-9999.**	-9999.**	99	-44.5	2.000+1
2536.	81.	16.	-3.	-16.	99	-49.1	2.500+1
2920.	101.	13.	2.	-13.	99	-53.3	3.000+1
2235.	92.	12.	0.	-12.	99	-55.3	4.000+1
2094.	89.	8.	-0.	-8.	99	-59.3	5.000+1
1980.	88.	10.	-0.	-10.	99	-62.0	6.000+1
1885.	85.	7.	-1.	-7.	99	-62.8	7.000+1
1802.	273.	1.	-0.	1.	99	-64.6	8.000+1
1669.	247.	5.	2.	5.	99	-66.7	1.000+2
1556.	276.	19.	-3.	19.	99	-70.6	1.250+2
1426.	268.	30.	1.	30.	99	-64.6	1.500+2
1331.	267.	31.	1.	31.	99	-57.8	1.750+2
1245.	262.	31.	4.	30.	99	-51.5	2.000+2
1097.	269.	25.	0.	25.	99	-40.7	2.500+2
976.	278.	20.	-3.	20.	16	-30.9	3.000+2
859.	297.	2.	-1.	2.	19	-25.0	3.500+2
761.	347.	3.	-3.	1.	21	-17.7	4.000+2
671.	335.	4.	-3.	2.	22	-11.2	4.500+2
589.	305.	2.	-1.	2.	23	-5.7	5.000+2
514.	212.	3.	3.	2.	22	-1.6	5.500+2
445.	130.	5.	3.	-4.	06	1.7	6.000+2
379.	134.	2.	1.	-1.	07	7.2	6.500+2
318.	306.	0.	-0.	0.	10	12.6	7.000+2
259.	151.	1.	1.	-0.	03	16.6	7.500+2
204.	164.	1.	1.	-0.	06	19.4	8.000+2
151.	193.	1.	1.	0.	06	21.5	8.500+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.